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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,640	12/29/2000	Akira Yamauchi	S004-4144 (PC)	5955

7590 08/02/2002
Adams & Wilks
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EXAMINER

WAKS, JOSEPH

ART UNIT PAPER NUMBER

2834

DATE MAILED: 08/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,640

Applicant(s)

YAMAUCHI ET AL.

Examiner

Joseph Waks

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-20 is/are allowed.
- 6) ☐ Claim(s) 1-3 and 6-10 is/are rejected.
- 7) ☐ Claim(s) 4,5 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/JP00/02062, filed on March 31, 2000.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the positional offset preventing means as recited in claim 1, the concave portion formed in an inner circumferential surface of the retainer member for receiving the corrugated plate-shaped damper as recited in claim 4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 2, 3, and 7-10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, line 3, “corrugated plate-shaped damper members” should be –said corrugated plate-shaped damper members--, line 4, “the positional offset preventing means” lacks antecedent basis since specification clearly indicates two different position offset preventing means of which one is associated with a single damper and the other with the pair of dampers indicated in claim 2.

In claim 3, lines 3 and 7, “corrugated plate-shaped damper members” should be –said corrugated plate-shaped damper members--, line 4, “the positional offset preventing means” lacks antecedent basis since specification clearly indicates two different position offset preventing means of which one is associated with a single damper and the other with the pair of dampers indicated in claim 2.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. **Claims 1 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Uyema et al.** (US 5,739,609) in view of **Brunet (FR 2 614 375)**.

Uyema et al. disclose a magnetic bearing apparatus comprising a rotor shaft 2, radial magnetic bearings 6 and 7, thrust magnetic bearings 5, and touchdown bearings 8, 9 supported by a retainer member 1 . However, **Uyema et al.** do not disclose the corrugated plate-shaped damper disposed in an annular gap between the touchdown bearings and the retainer.

Brunet discloses a magnetic bearing apparatus having a corrugated plate-shaped damper 44 disposed in an annular gap between the touchdown bearing 3 and the retainer 1 having positional offset preventing means (i.e. friction fit with the retainer) for the purpose of reducing the potential damages to the rotor and the landing bearing during over-speed conditions.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the magnetic bearing apparatus as taught by **Uyema et al.** and to provide the corrugated plate-shaped damper disposed in an annular gap between the touchdown bearings and the retainer as taught by **Brunet** for the purpose of reducing the potential damages to the rotor and the landing bearing located at the shaft end during over-speed conditions.

Allowable Subject Matter

8. **Claims 12-20** are allowed.

The feature of the pair of roller bearings disposed between the thrust bearing and the rotor shaft and the pair of corrugated damper members disposed in the annular gap between the roller bearing outer races and the inner circumferential surface of the retainer, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

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9. **Claims 2, 3, and 7-10** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Re claims 2, 7, and 8, the feature of the pair of dampers having a thin metal plate interposed in between, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Re claims 3, 9, and 10, the feature of the pair of dampers having an annular convex portion formed in an inner circumferential surface of the retainer member separating the pair of the corrugated plate-shaped damper members, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

10. **Claims 4, 5, and 11** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The feature of the positional offset preventing means comprising an annular concave portion formed in an inner circumferential surface of the retainer member for receiving the corrugated plate-shaped damper, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Communication

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW
July 31, 2002